INTRODUCTION
Risk = Hazard * Exposure * Vulnerability
Insurers transfer some risk from their clients onto themselves by reducing clients’ financial vulnerability in the event of a disaster. Climate change is increasing the hazard, or likelihood of disaster, that clients face. Crop insurance helps to mitigate farmers’ risks in case of a bad season. Rainfall-based index insurance gives monetary payouts when there is less rain than is historically expected in a given region. The advantages of this are that farmers can use the money as the season occurs, rather than after facing losses, and insurers do not need to travel to assess damages at several individual farms. The difficulty is in dealing with the increasing uncertainty resulting from climate change.

KEY TERMS
Index insurance: monitors a parameter related to the actual goods being insured. This can mean using rainfall as a proxy for crop yield.
Trigger: a value in the measured parameter that leads to an insurance payout

METHODS
Conducted a literature review to identify trends and gaps in knowledge of rainfall-based index insurance, specifically in Sub-Saharan Africa.

Sorted data provided by ACRE (Agriculture and Climate Risk Enterprise) Rwanda and government-led national surveys to better understand the population of insured farmers (crops grown, access to information, availability of credit). Analyzed numerical data in comparison to the trends identified in literature review. Questions remaining provide basis for further investigation.

RESULTS
Overall, the Pearson correlation coefficient between district-wide rainfall averages and crop yields was low. The graph shown here is for a specific district.

FURTHER QUESTIONS
Why is there little correlation between satellite rainfall data and crop yield? (Rwanda likely has many microclimates—maybe district-level data is too general?)

How does insurance impact farmers’ attitudes towards climate risk?

REFERENCES